

WHAT IS CLAIMED IS:

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A stent, comprising:

a) an expandable tubular body having a first end and a second end; and

5 b) at least one cover connector on the tubular body having a first end, a second end, a first section adjacent the first end of the connector, a second section adjacent the second end of the connector, and a third section between the first and second sections, and having an open configuration, and a closed configuration in which the first section has at least one bend and the second section has at least one bend so that the first and second sections are bent together and are directed towards the third section.

10 2. The stent of claim 1 wherein the connector has portions configured to bend when the connector assumes the closed configuration.

15 3. The stent of claim 1 wherein the connector assumes the closed configuration when the first section is bent at a first location, and the second section is bent at a first location on the second section.

20 4. The stent of claim 1 wherein the connector assumes the closed configuration when the first section has a first bend and a second bend in

the same direction as the first bend in the first section, and the second section has a first bend and a second bend in the same direction as the second bend in the second section.

5           5.     The stent of claim 4 wherein the second bend on the first section is between the first bend on the first section and the first end of the connector, and the second bend on the second section is between the first bend on the second section and the second end of the connector.

10           6.     The stent of claim 4 wherein the second bend on the first section is between the first bend on the first section and the third section of the connector, and the second bend on the second section is between the first bend on the second section and the third section of the connector.

15           7.     The stent of claim 1 wherein the first end and the second end of the connector are configured to pierce a stent cover.

          8.     The stent of claim 7 wherein the first end and the second end of the connector are tapered to a pointed tip.

20           9.     The stent of claim 1 wherein the tubular body has spaced apart wall sections defining an open-walled structure, and the connector is secured to a support member extending between the spaced apart wall sections.

10. The stent of claim 9 wherein the support member has a first end secured to the tubular body and a second end secured to the tubular body, and the third section of the connector is secured to the support member between the first and second ends of the support member.

11. The stent of claim 1 having a plurality of cover connectors extending from the first end to the second end of the tubular body.

12. The stent of claim 1 wherein the connector is about 0.15 mm to about 10 mm in length.

13. The stent of claim 1 wherein the connector is substantially perpendicular to the longitudinal axis of the tubular body in the open configuration.

14. The stent of claim 1 wherein the connector is substantially parallel to the longitudinal axis of the tubular body in the open configuration.

15. A stent assembly, comprising:

a) an expandable tubular body, and at least one cover connector on the tubular body having a first end, a second end, a first section adjacent the first end of the connector, a second section

adjacent the second end of the connector, and a third section between the first and second sections, and having an open configuration, and a closed configuration in which the first section has at least one bend and the second section has at least one bend so that the first and second sections are bent together and are directed towards the third section; and

b) a cover having a first end and a second end, and wherein at least a portion of the first section and the second section of the cover connector extend through the cover to secure the cover to the stent.

16. The stent assembly of claim 15 wherein the cover has an outer surface, and an inner surface adjacent a surface of the tubular body, and the first and second sections of the cover connector are adjacent the outer surface of the cover and the third section of the cover connector is adjacent the inner surface of the cover in the closed configuration.

17. The stent assembly of claim 15 wherein the cover is a cylinder about the tubular body, having a first edge extending the length of the cover from the first end of the cover to the second end of the cover, and a second edge extending the length of the cover from the first end of the cover to the second end of the cover.

18. The stent assembly of claim 17 wherein the cover on the stent forms a cylinder with the first edge abutting the second edge.

19. The stent assembly of claim 17 wherein the cover on the stent forms a cylinder with the first edge overlapping the second edge.

20. The stent assembly of claim 17 wherein the first section of the cover connector extends through the cover at a first location on the cover adjacent to the first edge, and the second section of the cover connector extends through the cover at a second location on the cover adjacent to the second edge.

21. The stent assembly of claim 15 wherein the cover on the stent extends from the first end of the stent to the second end of the stent.

22. The stent assembly of claim 15 wherein the cover is formed of biocompatible, non-thrombogenic material.

23. The stent assembly of claim 15 wherein the cover has an inner surface, and an outer surface adjacent a surface of the tubular body, and the first and second sections of the cover connector are

adjacent the inner surface of the cover and the third section of the cover connector is adjacent the outer surface of the cover in the closed configuration.

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24. The stent assembly of claim 15 wherein the cover is a cylinder within a lumen of the tubular body, having a first edge extending the length of the cover from the first end of the cover to the second end of the cover, and a second edge extending the length of the cover from the first end of the cover to the second end of the cover.

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25. A method of securing a cover to a stent, comprising:

a) providing a stent having an expandable tubular body having a first end and a second end, and at least one cover connector on the tubular body an expandable tubular body, and at least one cover connector on the tubular body having a first end, a second end, a first section adjacent the first end of the connector, a second section adjacent the second end of the connector, and a third section between the first and second sections, and having an open configuration, and a closed configuration in which the first section has at least one bend and the second section has at least one bend so that the first and second sections are bent together and are directed towards the third section; and

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b) piercing the first end of the cover connector through a cover at a first location on the cover, and piercing the second end of the cover connector through the cover at a second location from an inner surface to an outer surface thereof;

5 c) bending the first section and the second section of the cover connector towards the third section to form the closed configuration, so that the first and second sections of the cover connector are adjacent the outer surface of the cover and the third section of the cover connector is adjacent the inner surface of the cover.

10 26. The method of claim 25 wherein the first end of the cover connector pierces the cover from an inner surface to an outer surface thereof, and the second end of the cover connector pierces the cover from an inner surface to an outer surface thereof, so that the inner surface of the cover is adjacent to a surface of the tubular body.

15 27. The method of claim 25 wherein the cover has a first end, a second end, and a first edge and a second edge extending from the first to the second end of the cover, and the including drawing the first and second edges together as the first and second sections are folded together, to form a cylinder of the material on the stent.

28. The method of claim 25 wherein the first end of the cover connector pierces the cover from an outer surface to an inner surface thereof, and the second end of the cover connector pierces the cover from an outer surface to an inner surface thereof, so that the outer surface of the cover is adjacent to a surface of the tubular body.

29. A stent, comprising:

a) a tubular body having a first end and a second end, and a midpoint therebetween;

b) at least one cover connector secured to an end of the tubular body, having an open configuration, and a closed configuration in which the connector extends toward the midpoint of the tubular body, and configured to fold from the open configuration to the closed configuration to contact a cover located between the cover connector and a surface of the stent.

30. The stent of claim 29 wherein the cover connector extends away from the midpoint of the tubular body in the open configuration.

31. The stent of claim 29 wherein the cover connector comprises a closed loop.



32. The stent of claim 29 wherein the cover connector has a surface which is substantially parallel to a surface of the tubular body in the closed configuration.

5 33. The stent of claim 29 having a plurality of cover connectors secured about a circumference of the first end and the second end of the tubular body.

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34. A stent assembly, comprising:

10 a) an expandable tubular body having a first end, a second end, and a midpoint therebetween, and a cover connector secured to the first end of the tubular body, having an open configuration, and a closed configuration in which the connector extends toward the midpoint of the tubular body, and configured to fold from the open configuration to the closed configuration to contact a cover located between the cover connector and a surface of the stent; and

15 b) a cover on a surface of the stent, having at least a section between the cover connector and a surface of the stent with an outer surface of the cover in contact with the cover connector.

20 35. A method of securing a cover to a stent, comprising:

a) providing a stent having an expandable tubular body having a first end, a second end, and a midpoint therebetween, and a cover

connector secured to the first end of the tubular body, having an open configuration, and a closed configuration in which the connector extends toward the midpoint of the tubular body, and configured to fold from the open configuration to the closed configuration to contact a cover located  
5 between the cover connector and a surface of the stent; and

b) placing a cover on the stent and folding the cover connector from the first configuration to the second configuration so that at least a section of the cover is between the cover connector and the outer surface of the stent with an outer surface of the cover in contact with the  
10 cover connector.

36. The method of claim 35 including compressing the cover between the cover connector and the stent surface.

15 ~~37.~~ A stent, comprising:

a) an expandable tubular body having a first end and a second end; and

b) at least one eyelet member on the expandable tubular body having an opening configured to receive a securing member therein to secure a cover to the tubular body.  
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38. The stent of claim 37 wherein the tubular body has spaced apart wall sections defining an open-walled structure, and the eyelet member

is secured to a support member extending between the spaced apart wall sections.

5 39. The stent of claim 37 wherein the eyelet member is a closed loop directly attached to the tubular body.

40. The stent of claim 37 wherein the eyelet member is an open loop directly attached to the tubular body.

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